

## USGS Activity B6

# **Hurricane Mitch: Landscape Analysis of Damaged Forest Resources of the Bay Islands and Caribbean Coast of Honduras**

By

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Figure 1. Flight lines and video coverage taken over the coastal zone of the Bay Islands and Caribbean coast of northern Honduras for this study.



Figure 2. Composite map of maximum predicted windspeeds by grid location and hurricane tracking across the northern coast extracted from the HURASIM hurricane simulator.

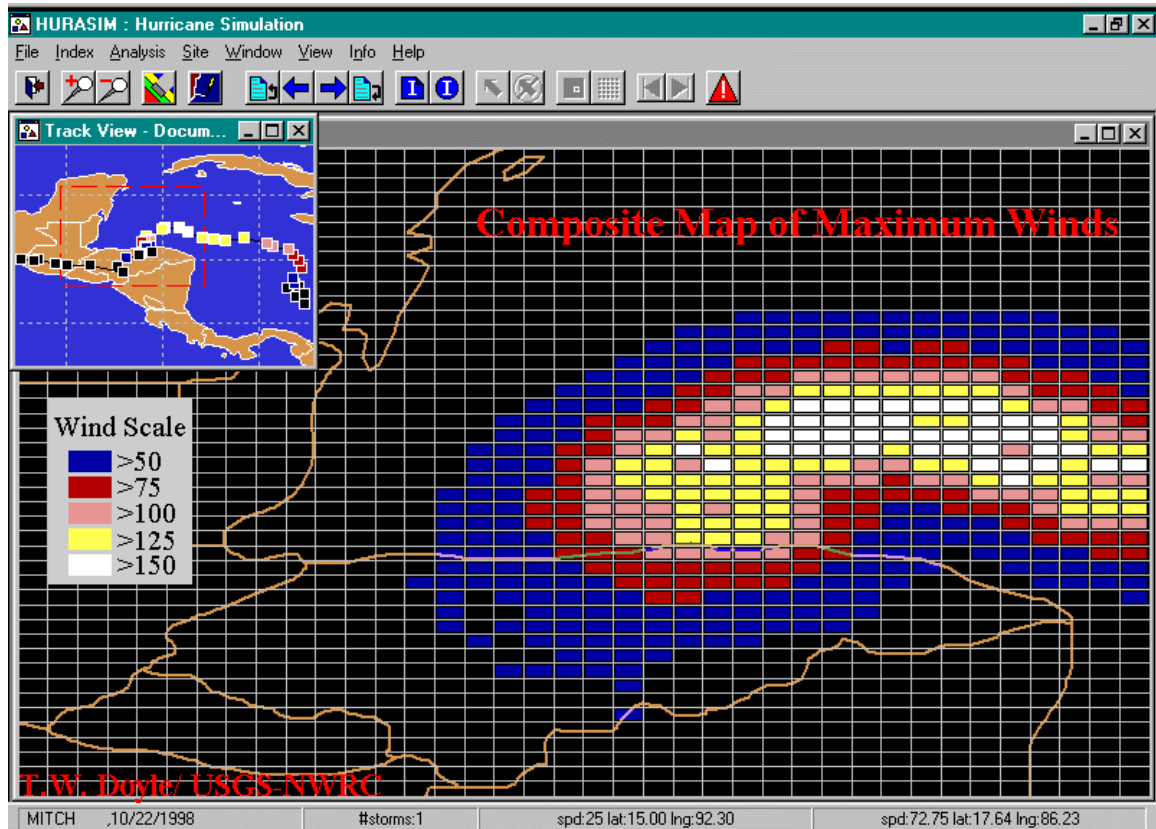


Figure 3. Ground photos of Guanaja forest landscape of pine, hardwood, and mangrove sites impacted by Hurricane Mitch in late fall 1998.

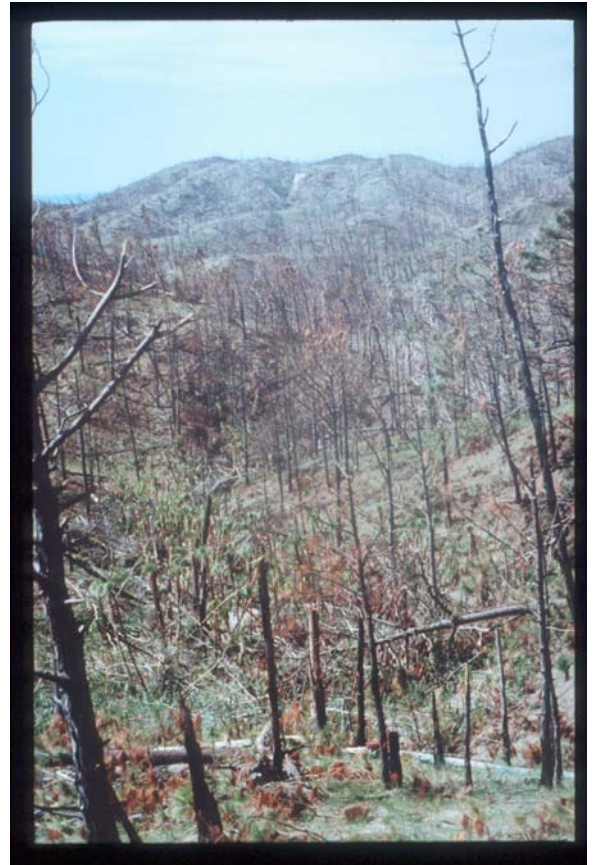


Figure 4. Map of northern Guanaja displaying coastal reaches and flightlines where forest damage was detected and graded by severity indicated by increasing color intensity. Arrows indicate general direction of treefall azimuths observed along this coastal stretch.





Figure 5. Sample freeze frame photo of groundview with histograms of area damage impact, tree heights, and windfall angles for a series of consecutive frames from overflight video of Mangrove Bight area, Guanaja. Shaded area of polar chart of windfall azimuths represents predicted hurricane wind vector range of winds greater than 100mph.

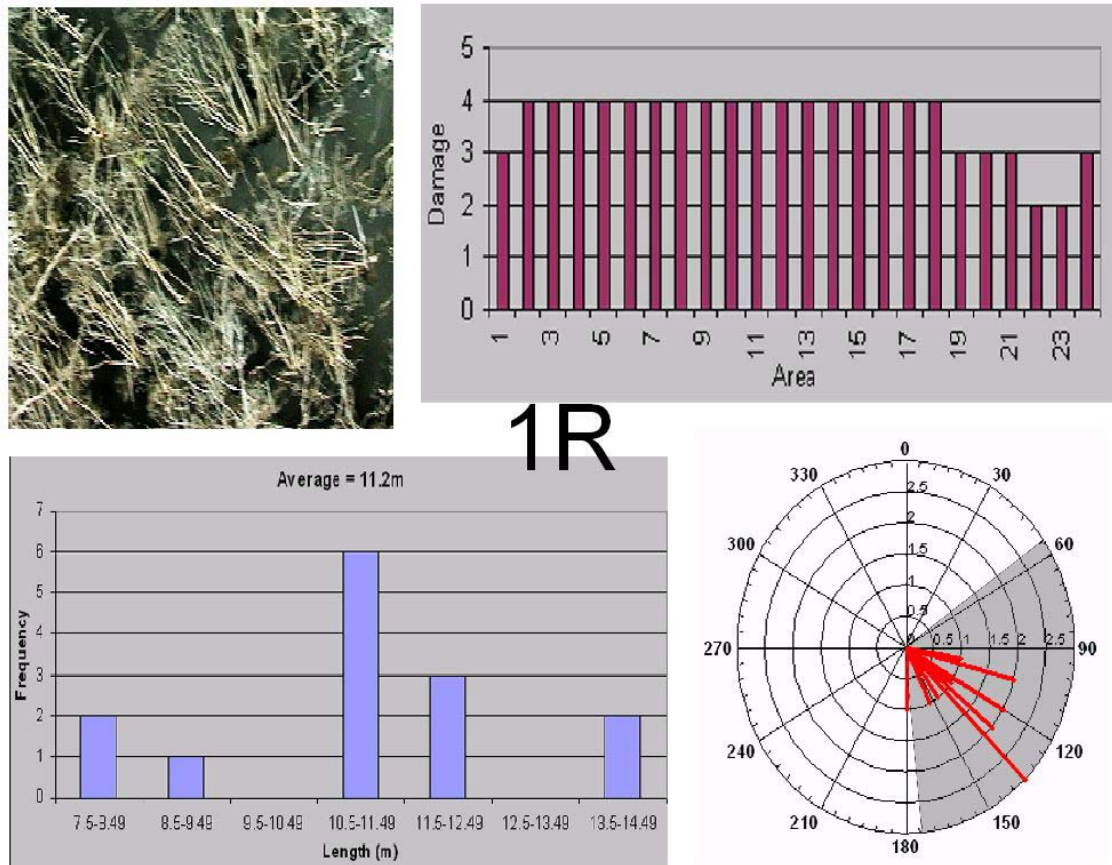


Figure 6. Sample freeze frame photo of groundview with histograms of area damage impact, tree heights, and windfall angles for a series of consecutive frames from overflight video of eastern Roatan area. Shaded area of polar chart of windfall azimuths represents predicted hurricane wind vector range of winds greater than 100mph.

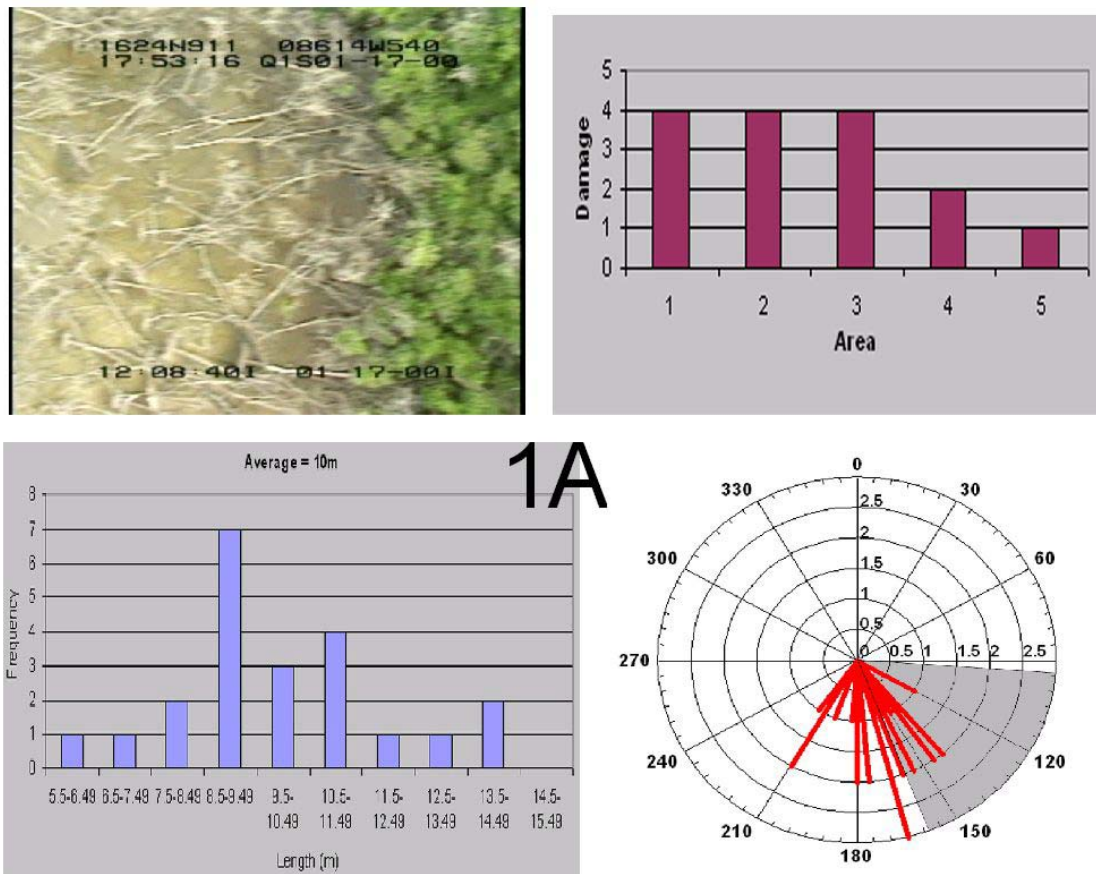




Figure 7. Map illustration of flight line and sites (colored circles) where damage was detectable in lowland and mangrove forest types east of Trujillo along the Caribbean coast of northern Honduras. The degree of canopy disturbance and forest recovery is graded accordingly by color intensity (dark red = severe impact, pink = intermediate, white = low impact). Arrows indicate general direction of treefall azimuths observed along this coastal stretch.

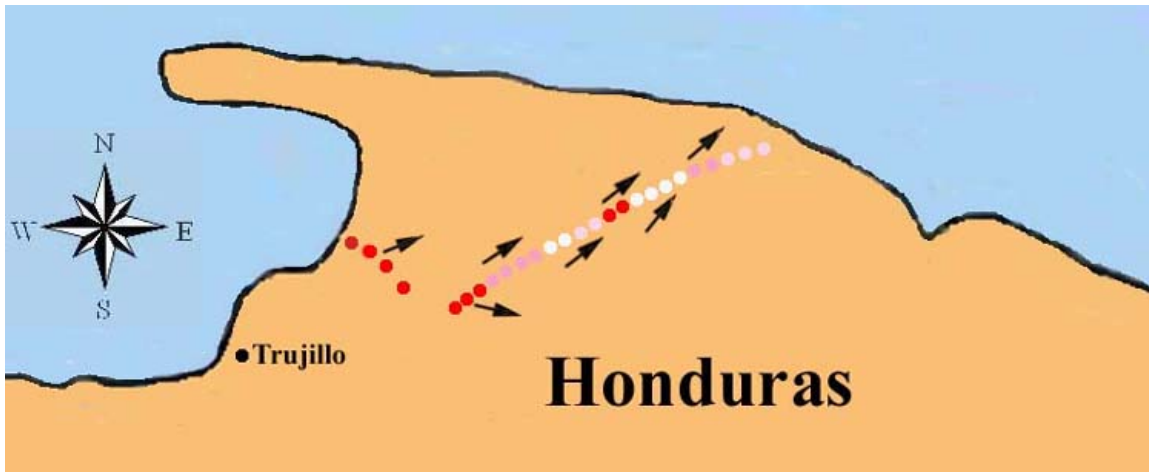


Figure 8. Sample freeze frame photo of groundview with histograms of area damage impact, tree heights, and windfall angles for a series of consecutive frames from overflight video of mainland coast area east of Trujillo, Honduras. Shaded area of polar chart of windfall azimuths represents predicted hurricane wind vector range of winds greater than 100mph.

